N° 13,051 A.D. 1894

Date of Application, 5th July, 1894—Accepted, 11th Aug., 1894

COMPLETE SPECIFICATION.

Improved Gymnastic Apparatus.

I, WILHELM NIEDIECK, of Halherstadt, Germany, Doctor of Medicine, do hereby declare the nature of this invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement :—

My invention relates to an apparatus for gynmastic exercises, more particularly intended for sanitary purposes, in using which not only the muscles of the arms and legs, but also those of the abdomen are brought strongly into play, whereby the functions of the abdominal organs, in particular the liver and intestines are greatly assisted.

I will describe the said apparatus with reference to the accompanying drawings in which Fig. 1 shews a longitudinal section, Fig. 2 a front view and Fig. 3 a plan.

The apparatus is constructed of flat or round iron bars, and, requiring but little space, can be erected in any dwelling room. It is best fixed permanently against a wall or on a floor.

On the upper part of the framing is a round bar on which run loose two pullies *a a* round which are laid strong ropes of hemp &c., the back ends of which are attached to weights *c c* while the front ends are secured to hand rings *d d* covered with leather in the usual manner.

In the lower part of the framing are mounted two bars *e e* upon which are placed helical springs *h h* which bear with their back ends against a fixed rail *f* and with their front ends against a plate *i* that can slide with holes upon the bars *e e*. These bars *e* are bent round in front and have their ends fixed in the vertical side frames *g g*, whereby the springs *h* are prevented from pushing the plate *i* off the bars *e*.

For readily guiding the plate *i* on the bars *e* when in use, sleeves *k k* are fixed to the former so as to slide with it upon the bars.

The apparatus is used in the sitting position in such manner, that the gymnast seizes the rings *d* with his hands, and at the same time bends up his legs so as to apply his feet against the plate *i*. The gymnast now pulls at the cords so as to raise the weights *c* in bending the arms, while his back is stretched flat upon the floor or on a mattrass, and at the same time he forces back the plate *i* with his feet with considerable energy until his legs are more or less completely stretched, the pressure thus exerted varying according to the strength of the springs, from about 100 lbs. to 140 lbs. and upwards. On relieving the strain on the muscles, the body will be brought back to the original position.

By means of this apparatus therefore the arms and legs are simultaneously brought into energetic action in a very simple manner, while by varying the weights and the strength of the springs on the one side or the other the members on the one side of the body may be subjected to greater exertion than the others (for which purpose the plate *i* might also be divided into two parts) which would be of special advantage in cases of lateral curvature of the spine.

By the said motion the muscles of the abdomen are brought strongly into play whereby an increased peristaltic action of the intestines and an increased function of the liver will be produced, these effects being of particular importance in cases of obesity which, in most cases, arise mainly from imperfect action of the abdominal organs, and must consequently be diminished by an improvement in the functions of these organs.

The above result is obtained with much greater certainty with the use of the

said apparatus than with the use of medicaments for reducing obesity and the injurious action on the constitution which frequently occurs in the latter case, is entirely avoided.

The apparatus is of such a size as not to occupy more room than an ordinary chair, and it can therefore be applied in any room without inconvenience.

It is applicable not only for adults but also for children the weights and springs being of course duly proportioned for the latter case.

Having now particularly described and ascertained the nature of this invention and in what manner the same is to be performed, I declare that what I claim is :—

1. A gymnastic apparatus for sanitary purposes wherein by a combined arrangement of weights to be raised and springs to be compressed or equivalent resistances to be overcome, movements of the arms and legs are obtained that bring strongly into play the abdominal muscles, whereby the functions of the abdominal organs are considerably increased, substantially as described.

2. In apparatus such as is referred to in the first claim, the arrangement of bars *e e* on which are mounted springs *h h* and a sliding plate *i* to be acted upon by the feet of the operator and of cords passing over pullies *a a* and attached at one end to weights *c* and at the other end to rings *d d* so that by pulling at the latter with the hands, the weights are raised, substantially as described.

Dated this 5th day of July 1894.

ABEL & IMRAY,
Agents for the Applicant.

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NIEDIECK'S COMPLETE SPECIFICATION. *(1 SHEET)*

Fig. 1.

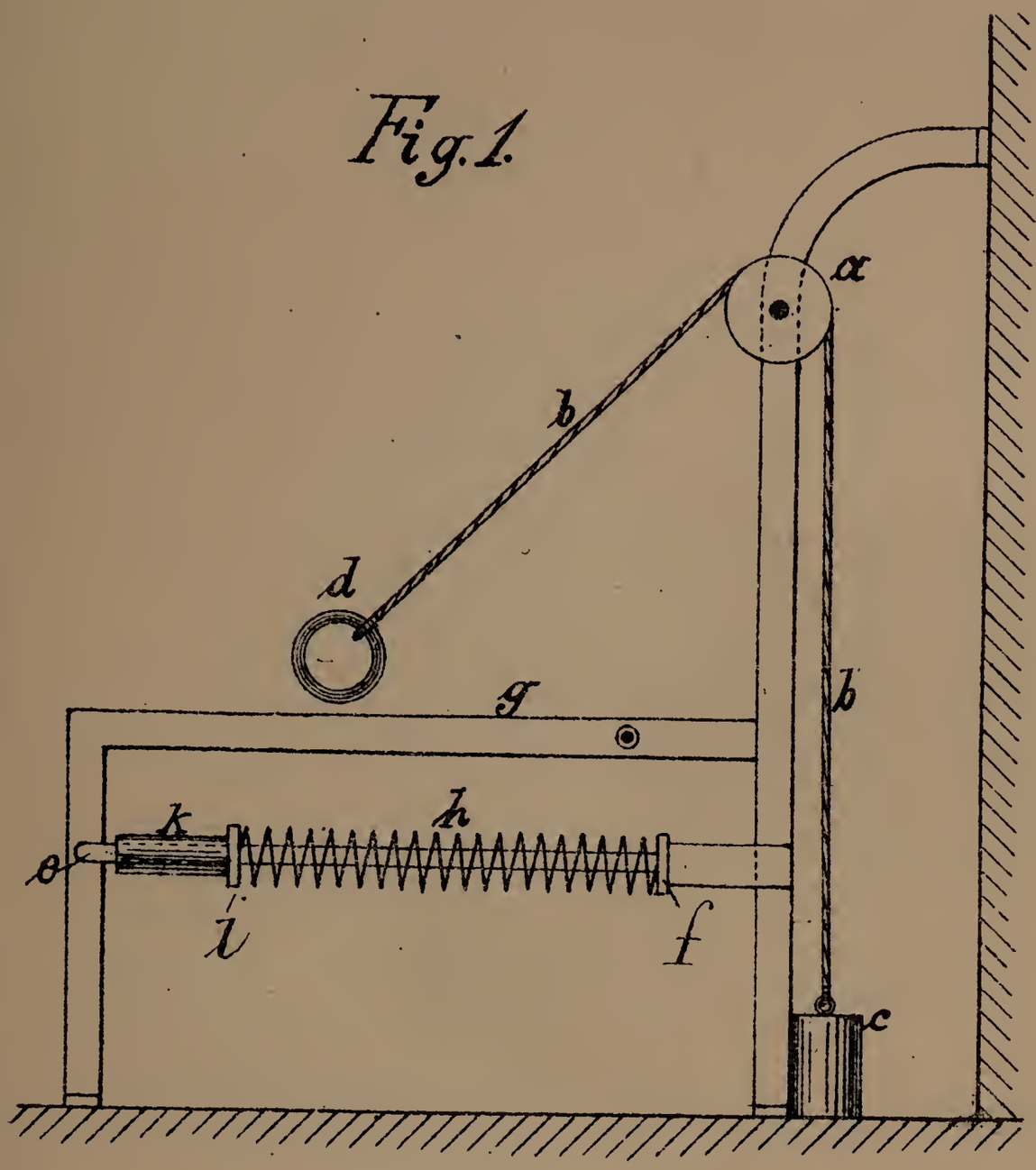


Fig. 2.

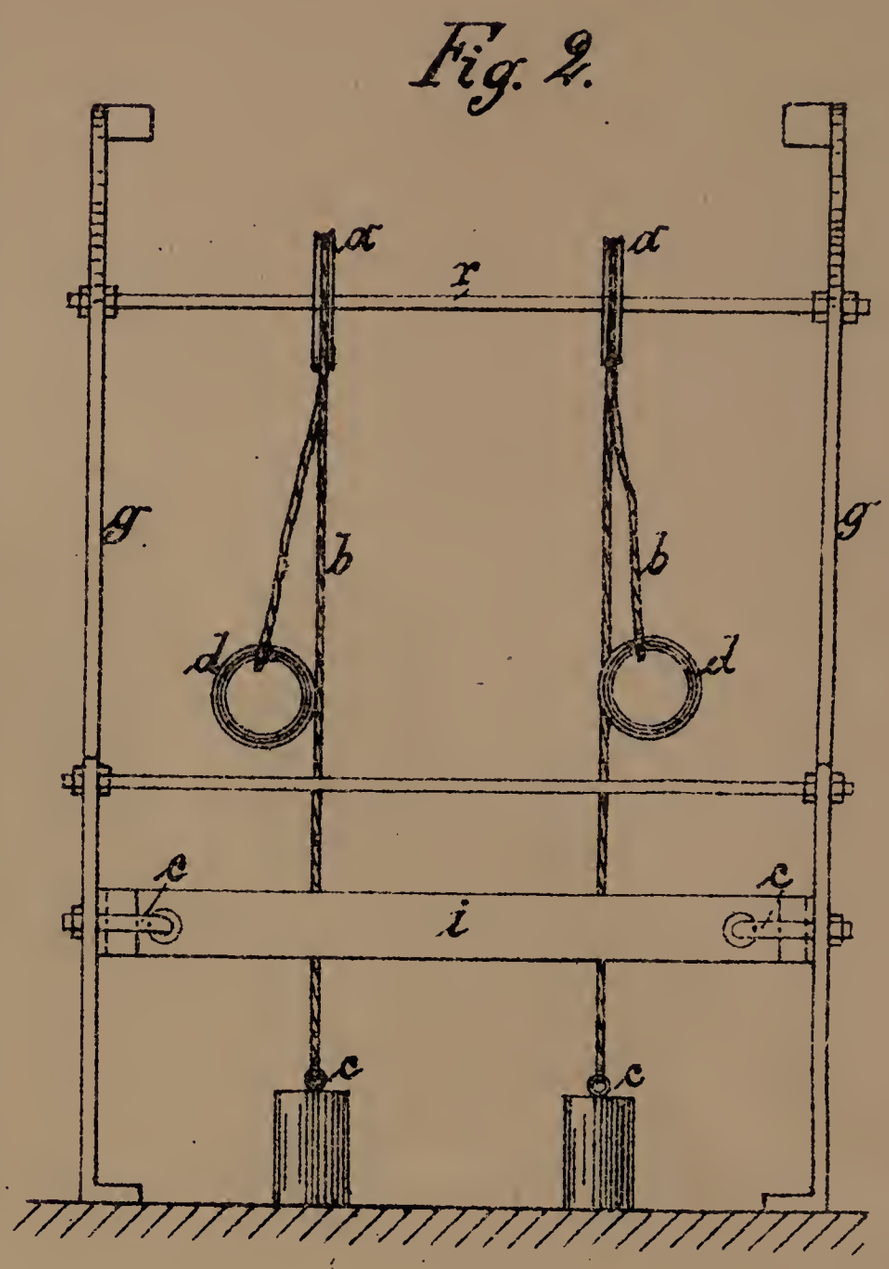
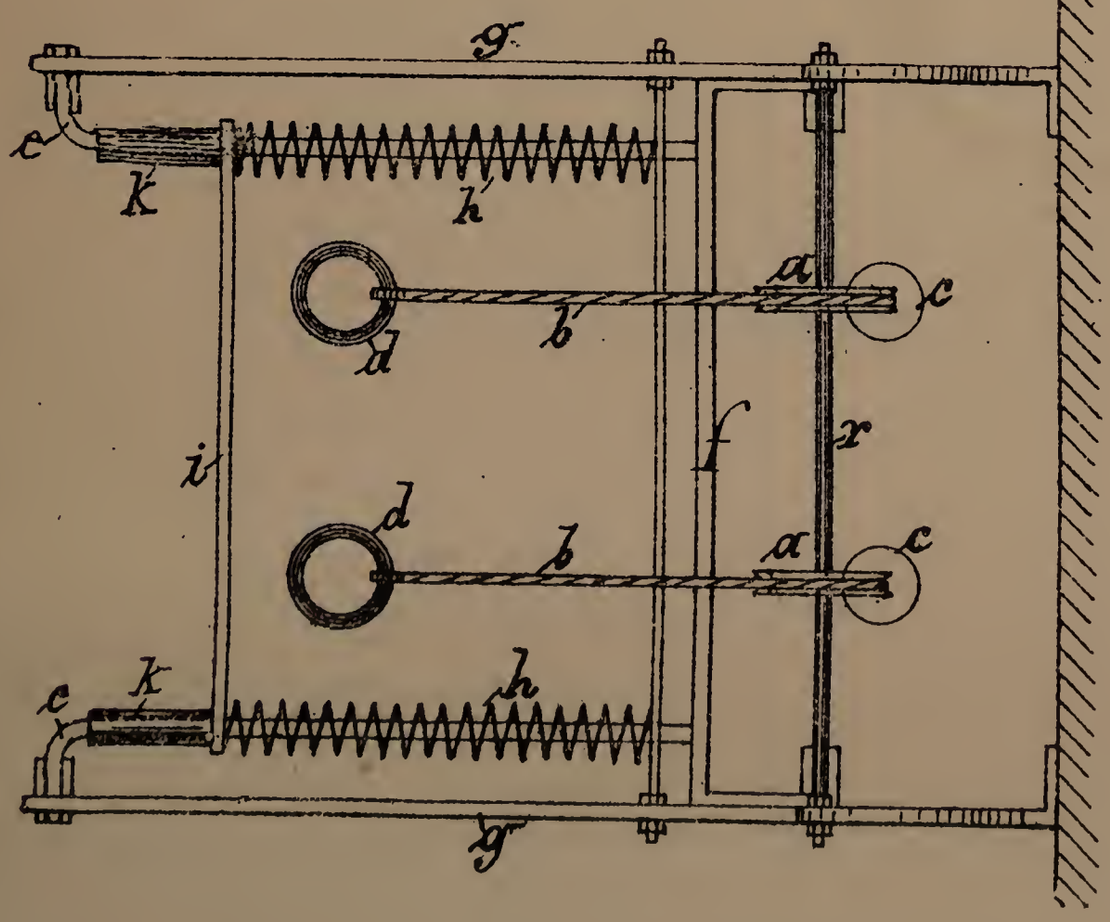


Fig. 3.



[This Drawing is a reproduction of the Original on a reduced scale]

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for Her Majesty's Stationery Office. 1894.

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